# Natural Resources Canada

## 2011-12

### Report on Plans and Priorities

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The Honourable Joe Oliver,
P.C., M.P. (Eglinton-Lawrence)
Minister of Natural Resources

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## Minister's Message

It is my pleasure to present the *2011–2012 Report on Plans and Priorities* for Natural Resources Canada (NRCan).

Canada is emerging from the economic downturn in a solid position. Its recovery is taking hold, due in large part to Canada's *Economic Action Plan,* which provided targeted and timely stimulus with a clear focus on maintaining and creating jobs for Canadians. At the same time, these investments are working to position Canada for long-term success in an ever-more globalized economy.

Natural resource sectors are a key driver in advancing Canada's transition from recession to growth. Natural Resources Canada is helping the Government continue to create jobs and strengthen industries by working to ensure the competitiveness and environmental responsibility of these critical sectors. It is achieving this priority through science, programming and smart investments that are helping resource industries innovate and develop the technologies, practices and products necessary to successfully compete in the global marketplace. We are seeing real successes – cleaner energy, greener and more socially responsible mining, and new, more sustainable forestry products and practices.

Securing Canada's future also demands that this country remain one of the best places in the world to invest. NRCan's Major Projects Management Office has already improved our investment climate, while maintaining the high environmental standards expected by Canadians. It is continuing to drive system-wide improvements to the regulatory system to further advance the competitiveness and sustainability of Canada's natural resource sectors.

Canada's North is another priority for this Government and a priority of NRCan. The Department is contributing to Canadian sovereignty, economic opportunity and social development in the North by generating knowledge and supporting sustainable resource development.

Finally, NRCan will continue to work over the coming year to help the Government advance Canada's status as a clean energy leader. Through the Clean Energy Fund, energy efficiency regulations and standards, and energy science and technology, the Department is playing a key role in helping Canada produce and consume energy in cleaner and more sustainable ways.

NRCan is helping the Government lay the foundation for long-term, sustainable growth, ensuring a more prosperous future for all Canadians.

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# Section I: Departmental Overview

## Raison d'être and Responsibilities

NRCan's vision is to improve the quality of life of Canadians by creating a sustainable resource advantage. It seeks to achieve this outcome by: working to improve the competitiveness of the natural resource sectors and ensuring the continuation of their significant contribution to Canada's economy; enabling the sustainable development of Canada's resources in a manner that advances the country's global standing as a leader on the environment; and using its knowledge and expertise of Canada's landmass to enhance the safety and security of citizens.

The Minister of Natural Resources is specifically responsible for, or has responsibilities under, more than 30 Acts of Parliament[i]. The Minister's core powers, duties and functions are set forth in the *Department of Natural Resources Act*, the *Resources and Technical Surveys Act* and the *Forestry Act*. NRCan also works in areas of shared responsibility with the provinces.

Within the Government of Canada, the Minister of Natural Resources also has responsibilities for the natural resources portfolio[ii], which includes the following:

- **Atomic Energy of Canada Limited**[iii] (AECL);
- Two independent regulators: the **National Energy Board**[iv] (NEB) and the **Canadian Nuclear Safety Commission**[v] (CNSC);
- Two offshore petroleum boards: the **Canada-Newfoundland and Labrador Offshore Petroleum Board**[vi] (CNLOPB) and the **Canada-Nova Scotia Offshore Petroleum Board**[vii] (CNSOPB); and
- **Sustainable Development Technology Canada**[viii] (SDTC), the **Energy Supplies Allocation Board**[ix] (ESAB), and the **Northern Pipeline Agency**[x] (NPA).

To deliver on its responsibilities, NRCan relies on a number of tools. It uses science and technology (S&T) to help address priorities and plan for the future. It develops policies, programs, and regulations that help create a sustainable resource advantage, supporting strong, competitive natural resource sectors that are environmentally and socially responsible. And it uses partnerships and international collaboration to help drive progress on natural resources issues important to Canadians.

## Planning Context

***Natural resources are a key economic driver for Canada***

Natural resources play a fundamental role in Canada's economy. These sectors have been an engine of growth and job creation for generations of Canadians. In 2009, they contributed $133 billion, or about 11%, to Canada's gross domestic product (GDP) and directly employed 755,000 people. Globally, Canada is a leading exporter of natural resources and associated technology and knowledge. In 2008, the country was the world's largest exporter of uranium, potash and newsprint, the second largest exporter of nickel and softwood lumber, and the third largest exporter of natural gas. Canada also has the second largest oil reserves in the world and

is the largest oil supplier to the US. Together, natural resources accounted for almost half of Canadian goods exports in 2009.

As well, the natural resources sectors also contribute significantly to business sector investment in Canada. They made capital investment of approximately $74 billion in 2009, accounting for 24 percent of the national total. Their investments are expected to increase to $81 billion in 2010, representing 25 percent of total business investments.

***The federal government's Economic Action Plan has helped mitigate the economic downturn***

Canada has recovered from the global economic downturn in a comparably better position than other G8 countries. Canadians are now seeing improved economic growth and new opportunities for the future. This success has much to do with the resilience of Canada's workforce, our strong fiscal fundamentals, vast natural resources and world-class technologies and services, which continue to underpin the competitiveness of our economy.

Canada's strong position has been supported by the federal government's Economic Action Plan (EAP), which invested $62 billion to create jobs and generate economic growth. Going forward, the federal government will continue to focus efforts on jobs and the economy, while returning Canada's books to a balanced position. A critical part of this long-term strategy is the sustainable development of Canada's natural resource sectors.

***Looking ahead, natural resources will continue to play a critical role in Canada's economy. As in the past, NRCan will assist the natural resources sectors in seizing opportunities***

The world economy is experiencing modest, albeit uneven, growth in the aftermath of the recession, led largely by China and other emerging economies. Many commodity prices have rebounded with the demand for vital resources expected to remain robust in 2011. The resurgence of global demand for oil is providing stimulus for rising crude prices, whereas natural gas prices are expected to remain relatively low due to robust supply. In addition, the price of most minerals and metals (e.g., gold, copper, uranium, metallurgical coal and iron ore) could move higher due to strong global demand and growing infrastructure investments, particularly in emerging economies.

There are other important forces at play that will affect the competitiveness of Canada's natural resource sectors. For instance, global demand is growing for new clean energy technologies and solutions – a trend that is increasingly viewed as part of the world's transition towards a lower carbon future. In response, major economies, including the US, China, Japan, the European Union (EU) as well as Canada, are making significant investments in clean energy as a way of creating economic opportunity while also tackling climate change.

Another related shift is a growing preference among consumers, shareholders and investors for products and companies that demonstrate greater environmental leadership and social responsibility. Canadian natural resource industries are reacting in positive ways to these new competitiveness pressures. For example, twenty-one forest companies have signed an agreement to protect Canada's boreal forest – working with environmental non-governmental organization for a more sustainable approach to forestry. The Mining Association of Canada

has implemented a mandatory performance assessment process on sustainable mining for its members – showing its commitment to greater corporate social responsibility.

As well, Canada's natural resource sectors are adding value to their operations through innovation, the creation of new technologies and knowledge, and partnerships with related industries as part of their extended supply and value chains. They are diversifying their business relations in order to increase revenues and expand market presence abroad – and in the process, they are creating high-quality jobs at home.

NRCan is a key partner for the natural resources sectors. The department is helping the forest sector transform itself through targeted investments in innovation. For example, NRCan is supporting the research and development needed to maintain Canada's leadership by advancing the commercial potential of technologies that can create new products and options for Canada's forest communities (e.g., conversing forest biomass into bioenergy).

The Canadian mining sector is reliant on new technologies and innovation to improve exploration results, be more productive and meet or exceed environmental performance standards. NRCan is contributing to the overall competitiveness of the industry through the development of new green technologies and processes that will enhance energy efficiency, reduce environmental footprint and lower operating costs. The department is also continuing to provide geoscience data, information and knowledge critical to encouraging private sector exploration and investment across the country, including in Canada's north.

Canada is a global energy leader and its energy sector is a key engine of growth for the whole of the economy. With government as partner, the energy sector is increasing its use of innovative clean energy technologies and bringing on-line new renewable sources of energy. NRCan's suite of energy programs will continue to support the competitiveness of the industry and priorities of the government by encouraging the uptake of clean and efficient energy products and services, creating and disseminating new knowledge, developing markets for new clean technologies and supporting industry-specific innovations. NRCan will maintain support of Canada's energy science and technology leadership and pursue international collaboration to drive clean energy research and development.

***Establishing Priorities***
NRCan is responding to the Government's priorities by focusing efforts in five key areas:

1. **Improving the performance of the regulatory system for major project reviews** which will help ensure that Canada is the best country in which to invest;
2. **Enabling competitive resource sectors**, with a focus on innovation and sustainable transformation in the forest sector, and green mining to enhance market opportunities and create the jobs and economy of tomorrow;
3. **Advancing clean energy** in Canada through science & technology advancements, innovation, and program investments;
4. **Managing nuclear issues** to contribute to Canada's energy and environmental needs, while reducing costs and risks to taxpayers; and
5. **Advancing sustainable resource development in the North** to help Canada realize the vast potential of the region's people and resources.

## Risk Analysis

As a large and diverse organization, NRCan prepares for and manages a wide range of risks. The department identifies and responds to these risks via an Integrated Risk Management (IRM) Framework, which it has updated for 2011-12.

The Framework includes a series of special purpose operational risk management instruments such as financial controls, business continuity planning, and programs for managing large or high-profile risks to Canada in the domains of explosives, natural hazards, and legacy nuclear waste. It also includes strategic risk management instruments such as medium term policy planning.

For fiscal year 2011-12, the department will be actively managing a range of key risks. Beyond those affecting the natural resources sectors that the department will manage through its programming, it will also address risks to its operations. Some of these risks are outlined below:

- As a science-based organization, NRCan is committed to the recruitment and development of a highly-skilled and knowledgeable workforce. Changing demographics and rapidly advancing technologies highlight the risk that NRCan may be unable to attract and retain the highly-qualified personnel it needs to deliver on its mandate. In response, NRCan has put in place a number of workforce and workplace initiatives, including a suite of workforce renewal strategies, HR service innovations and tools, and career development support and programs.
- NRCan is responsible for providing seismic and space weather monitoring and alerting services to first responders and the general public. Given the potential for severe events to disable critical communication infrastructure - as well as an increase in the use and expectation of information availability due to the proliferation of social networks and mobile web access technologies - there are risks that emergency responders, critical infrastructure operators, media and the public might not be able to access the information they need to respond appropriately in the event of an emergency. Current

mitigation strategies associated with this risk include the enabling of greater surge capacity, the creation of redundancy in operations, the exploitation of multiple communication channels, and the implementation of an Activate Crisis Communications Protocol.

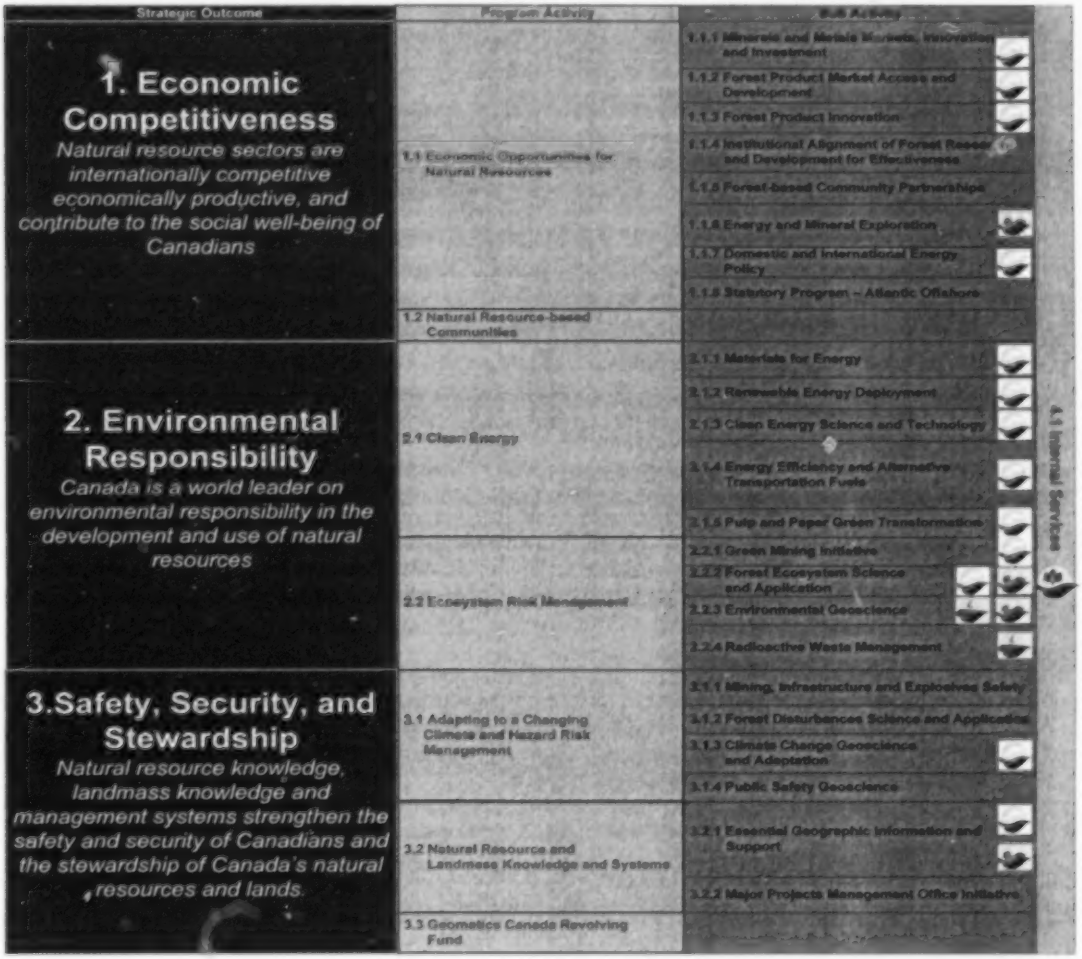
- NRCan has taken a series of steps to ensure the smooth implementation of a new financial management system on April 1st, 2011. Risk mitigation measures have been put in place and include the choice of an already established system through a partnership with Agriculture and Agri-Food Canada, the implementation of robust project management governance, and an extensive training program to ensure a smooth transition.

## Contribution to the Federal Sustainable Development Strategy (FSDS)

NRCan is a participant in the Federal Sustainable Development Strategy (FSDS). The FSDS represents a major step forward for the Government of Canada by including environmental sustainability and strategic environmental assessment as an integral part of its decision-making processes. NRCan's contributions to the FSDS are further explained in Sections II, III and IV.

Sustainable development is central to the mandate of NRCan and essential to the future of the natural resources sector. NRCan is committed to delivering on its vision of improving the quality of life of Canadians by creating a sustainable resource advantage. For additional details on NRCan's activities to support sustainable development and on Greening Government Operations please see http://www.nrcan-rncan.gc.ca/sd-dd/index-eng.php and http://www.tbs-sct.gc.ca/rpp/2011-2012/info/info-eng.asp. For complete details on the Federal Sustainable Development Strategy, please see http://www.ec.gc.ca/dd-sd/default.asp?lang=En&n=C2844D2D-1.

## Strategic Outcome(s) and Program Activity Architecture (PAA)




## Tag Legend for FSDS Themes:

**Theme I: Addressing Climate Change and Air Quality**

**Theme II: Maintaining Water Quality and Availability**

**Theme III: Protecting Nature**

**Theme IV: Shrinking the Environmental Footprint – Beginning with Government**

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## Strategic Outcome(s) and Program Activity Architecture (PAA)

| Strategic Outcome | Program Activity | Sub Activity |
|---|---|---|
| **1. Economic Competitiveness**<br>*Natural resource sectors are internationally competitive economically productive, and contribute to the social well-being of Canadians* | 1.1 Economic Opportunities for Natural Resources | 1.1.1 Minerals and Metals Markets, Innovation and Investment |
| | | 1.1.2 Forest Product Market Access and Development |
| | | 1.1.3 Forest Product Innovation |
| | | 1.1.4 Institutional Alignment of Forest Research and Development for Effectiveness |
| | | 1.1.5 Forest-based Community Partnerships |
| | | 1.1.6 Energy and Mineral Exploration |
| | | 1.1.7 Domestic and International Energy Policy |
| | | 1.1.8 Statutory Program – Atlantic Offshore |
| | 1.2 Natural Resource-based Communities | |
| **2. Environmental Responsibility**<br>*Canada is a world leader on environmental responsibility in the development and use of natural resources* | 2.1 Clean Energy | 2.1.1 Materials for Energy |
| | | 2.1.2 Renewable Energy Deployment |
| | | 2.1.3 Clean Energy Science and Technology |
| | | 2.1.4 Energy Efficiency and Alternative Transportation Fuels |
| | | 2.1.5 Pulp and Paper Green Transformation |
| | 2.2 Ecosystem Risk Management | 2.2.1 Green Mining Initiative |
| | | 2.2.2 Forest Ecosystem Science and Application |
| | | 2.2.3 Environmental Geoscience |
| | | 2.2.4 Radioactive Waste Management |
| **3.Safety, Security, and Stewardship**<br>*Natural resource knowledge, landmass knowledge and management systems strengthen the safety and security of Canadians and the stewardship of Canada's natural resources and lands.* | 3.1 Adapting to a Changing Climate and Hazard Risk Management | 3.1.1 Mining, Infrastructure and Explosives Safety |
| | | 3.1.2 Forest Disturbances Science and Application |
| | | 3.1.3 Climate Change Geoscience and Adaptation |
| | | 3.1.4 Public Safety Geoscience |
| | 3.2 Natural Resource and Landmass Knowledge and Systems | 3.2.1 Essential Geographic Information and Support |
| | | 3.2.2 Major Projects Management Office Initiative |
| | 3.3 Geomatics Canada Revolving Fund | |

4.1 Internal Services

### Tag Legend for FSDS Themes:

**Theme I: Addressing Climate Change and Air Quality**

**Theme II: Maintaining Water Quality and Availability**

**Theme III: Protecting Nature**

**Theme IV: Shrinking the Environmental Footprint – Beginning with Government**

## Planning Summary

Financial Resources ($ thousands)

| 2011–12 | 2012–13 | 2013–14 |
|---|---|---|
| 3,524,047 | 2,901,902 | 2,402,432 |

Human Resources (Full-time Equivalent – FTE)

| 2011–12 | 2012–13 | 2013–14 |
|---|---|---|
| 4,389 | 4,182 | 4,155 |

| **Strategic Outcome 1 : Economic Competitiveness**<br>Natural resource sectors are internationally competitive, economically productive and contribute to the social well-being of Canadians | | | | | |
|---|---|---|---|---|---|
| **Performance Indicators** | | **Targets** | | | |
| Canada's share of resource-based world trade (as measured by the Trade Performance Index) | | Favourable 5-year trend in rank position | | | |
| **Program Activity** | **Forecast Spending 2010–11** | **Planned Spending** | | | **Alignment to Government of Canada Outcomes** |
| | | **2011–12** | **2012–13** | **2013–14** | |
| 1.1 Economic Opportunities for Natural Resources | 1,924,547 | 1,799,349 | 1,638,574 | 1,375,701 | Strong Economic Growth |
| 1.2 Natural Resource-based Communities | 11,795 | 0 | 0 | 0 | Strong Economic Growth |
| **Total Planned Spending** | | 1,799,349 | 1,638,574 | 1,375,701 | |

| **Strategic Outcome 2: Environmental Responsibility**<br>Canada is a world leader on environmental responsibility in the development and use of natural resources | |
|---|---|
| **Performance Indicators** | **Targets** |
| i) Canada's total annual energy savings due to efficiency.<br>(ii) NRCan's contribution to advancement of innovative and environmentally responsible resource practices in the resource sector measured by uptake of knowledge, technologies, and demonstration projects. | (i) Favourable 5-year trend in Petajoules (PJ) saved<br>(ii) Favourable long-term trend in number of publications |

| Program Activity | Forecast Spending 2010–11 | Planned Spending | | | Alignment to Government of Canada Outcomes |
|---|---|---|---|---|---|
| | | 2011–12 | 2012–13 | 2013–14 | |
| 2.1 Clean Energy | 1,926,436 | 1,327,303 | 890,405 | 661,975 | A Clean and Healthy Environment |
| 2.2 Ecosystem Risk Management | 194,702 | 86,975 | 99,367 | 92,243 | A Clean and Healthy Environment |
| **Total Planned Spending** | | 1,414,277 | 989,772 | 754,219 | |

| **Strategic Outcome 3: Safety, Security and Stewardship**<br>Natural resource knowledge, landmass knowledge and management system strengthen the safety and security of Canadians and the stewardship of Canada's natural resources and lands. | |
|---|---|
| **Performance Indicators** | **Targets** |
| Contribution to the safety and security of Canadians, and the effectiveness of federal land stewardship and regulatory processes. | Favourable long-term trend in number of publications<br><br>Greater than 90% of landmass and natural hazard data meets timeliness and accessibility standards |

| Program Activity | Forecast Spending 2010–11 | Planned Spending | | | Alignment to Government of Canada Outcomes |
|---|---|---|---|---|---|
| | | 2011–12 | 2012–13 | 2013–14 | |
| 3.1 Adapting to a Changing Climate and Hazard Risk Management | 68,617 | 63,558 | 51,519 | 52,231 | An Innovative and Knowledge-based Economy |
| 3.2 Natural Resource and Landmass Knowledge for Canadians | 103,655 | 84,371 | 67,890 | 67,272 | An Innovative and Knowledge-based Economy |
| 3.3 Geomatics Canada Revolving Fund | 1,968 (1,968) | 1,968 (1,968) | 1,968 (1, 968) | 1,968 (1, 968) | An Innovative and Knowledge-based Economy |
| **Total Planned Spending** | | 147,929 | 119,409 | 119,503 | |

| Program Activity | Forecast Spending 2010–11 | Planned Spending | | | Alignment to Government of Canada Outcomes |
|---|---|---|---|---|---|
| | | 2011–12 | 2012–13 | 2013–14 | |
| OTHER<br>4.1 Internal Services | 222,972 | 162,493 | 154,147 | 153,008 | |
| **Total Planned Spending** | 4,452,723 | 3,524,047 | 2,901,902 | 2,402,432 | |

## Contribution of Priorities to Strategic Outcomes

### Operational Priorities[1]

| Priority: **Improving the Performance of the Regulatory System for Major Project Reviews** | **Supports SO # 1, 2 & 3** | **Previously Committed Priority** |
|---|---|---|

**Why is this a priority?**

Addressing the challenges facing the federal regulatory system for project reviews is key to creating the conditions for an innovative and prosperous economy, protecting the health and safety of Canadians, and protecting the environment.

**What are the plans for meeting this priority?**

Through the Major Projects Management Office (MPMO), NRCan will provide overarching management of the federal regulatory review process for over 60 proposed major resource projects representing approximately $100 billion of potential new investment in Canada. The MPMO will work collaboratively with federal regulatory departments and agencies to expand existing tools, processes and procedures to enhance the timeliness, predictability, transparency and accountability of project reviews. The MPMO will also provide leadership across the Government of Canada to advance further policy, regulatory and legislative improvements to the federal regulatory system, including measures to improve integration of federal and provincial review processes.

**Commitments for 2011-12**

Ongoing development and implementation of a suite of legislative, regulatory and policy changes to deliver predictable and timely project reviews, reduce regulatory burden, improve environmental protection and provide for more meaningful aboriginal consultations in support of the Government's economic agenda.

Develop Project Agreements that include target timelines, service standards and workplans for all MPMO projects undergoing a federal regulatory review to ensure timely, integrated and well coordinated environmental assessment, regulatory decision-making and Aboriginal consultation.

Maintain robust tracking, monitoring, reporting and issue resolution mechanisms on MPMO projects to ensure adherence to target timelines and service standards in Project Agreements, as measured by the percentage (more than 80%) of active or completed MPMO projects that are on time or within 8 weeks

[1] An ongoing priority has no end date; a previously committed priority has an estimated end date and was committed to in prior budgets or main estimates documents.

of the project-specific service standards and target timelines.

Work collaboratively with partners to strengthen northern regulatory regimes and to improve integration of federal and provincial review processes.

Undertake an evaluation of the MPMO Initiative that provides recommendations/proposals to improve program design.

| Priority:<br>**Enabling Competitive Resource Sectors** | **Supports SO # 1, 2 & 3** | **Previously Committed Priority** |
|---|---|---|

**Why is this a priority?**

Canada's natural resource sectors are facing long-term challenges. Supporting innovation and sustainable change is key to improving the long-term competitiveness and sustainability of these sectors.

**What are the plans for meeting this priority?**

NRCan will work on forest product innovation to help support the forest sector's transition away from its historical focus on volume-based commodities (e.g., lumber and pulp) towards increased emphasis on a more diversified, higher-value product mix. NRCan also plays an important role in supporting provincial and territorial governments, industry and other forest sector stakeholders in promoting Canada's leadership in sustainable forest management in international markets.

NRCan also supports the mineral and mining sectors by providing scientific data on mineral systems that form Canada's major deposit types. The Targeted Geoscience Initiative 4 will provide information and technologies that will contribute to new discoveries of mineral resources that will sustain the economic viability of many communities. The development and implementation of a Base-Metal Strategy will also serve to promote the identification and development of new base-metal resources in existing mining camps and remote areas, including the North.

The pan-Canadian Green Mining Initiative, a multi-stakeholder initiative, will further reduce the environmental impacts of mining through the promotion and development of environmentally-friendly technologies and processes, and create opportunities for technology transfer abroad. Support for the sector will also be provided through the implementation of a corporate social responsibility strategy

**Commitments for 2011-12**

Through the Leadership for Environmental Advantage in Forestry Initiative, provide 10 science-based information products (e.g., reports) to forest sector stakeholders (e.g., Canadian wood product producers and related industry associations) that address key environmental reputation and market acceptance issues for use both domestically and internationally.

As part of TGI-4, sign eight collaborative arrangements with provincial, territorial, academia and industrial partners.

Deliver tools such as exploration modeling in order to optimize effectiveness in exploring for certain types of mineral deposits.

Complete reports on an *Overview of Trends in Canadian Mineral Exploration* and *comparative international tax study for base metals*.

Advance Green Mining Initiative projects and knowledge transfer, specifically:

- 15 R&D publications on environnemental technologies;
- 10 projects completed with industry and government stakeholders;
- 10 Ground Control, safe mining or innovative projects.

The scope of these projects includes: (1) reducing risks related to mining at a great depth to access mineral deposits and improving the productivity of Canadian mining operations; (2) developing innovative technologies on the effect of heat stress on mine workers; and, (3) developing and testing processes for long term storage of radioactive wastes in Canada.

| Priority: **Advancing Clean Energy** | **Supports SO # 1 & 2** | **Previously Committed Priority** |
|---|---|---|

**Why is this a priority?**

Energy is a significant segment of the economy and Canada's leading resource export. Strong federal leadership is critical to ensuring that all of Canada's energy resources continue to contribute to the country's economy, while meeting domestic and global expectations that energy be produced and used in cleaner and more sustainable ways.

**What are the plans for meeting this priority?**

NRCan supports a clean energy transition by delivering programs that support energy efficiency, the development of renewables and clean electricity, and cleaner fossil fuels and alternatives.

Clean energy programs support the government's objectives by encouraging the uptake of energy efficiency products and services, developing markets for new clean technologies (e.g. the ecoENERGY for Biofuels Initiative), and supporting industry-specific innovations (e.g. the Pulp and Paper Green Transformation Program).

NRCan will continue to support Canada's science and innovation system and pursue international collaboration to drive clean energy research and development. In particular, the ecoENERGY Technology Initiative and the Clean Energy Fund support the research, development and demonstration of cutting-edge clean energy technologies, including carbon capture and storage.

The department also provides relevant data, information and knowledge focused on encouraging the development of unconventional and renewable resources such as shale gas, gas hydrates, solar, wind, geothermal and tidal energy supplies, which could become important components of Canada's future energy mix.

**Commitments for 2011-12**

Establish and maintain partnerships with industry and provincial stakeholders through contracts and contribution agreements to cost-share clean-energy technology projects. These projects include:

- A contribution agreement for the carbon capture and storage project with TransAlta Project Pioneer.
- A series of sustainable community energy demonstration projects co-funded with Canada Mortgage and Housing Corporation.
- A collaborative project with universities and companies to design, build and test a light weight structure for vehicles to promote energy fuel efficiency and test safety.
- A project to retrofit biomass into large industrial iron-making process furnaces.
- A project in collaboration with other government departments and international partners, to develop new materials for the next generation nuclear reactor systems (GEN IV) which will contribute to cleaner, high-temperature energy systems.

Monitor current and new projects related to clean energy science and technology, as well as geosciences, and ensure results are achieved, including:

- Pilot-scale research to reduce the cost and increase the efficiency of CCS;
- Publish a study on geological parameters impact assessment for carbon storage;

- Publish an evaluation of geothermal energy potential, and
- Develop a marine energy technology roadmap.

By the conclusion of the Pulp and Paper Green Transformation Program at the end of 2011-12, contribution agreements with 25 participating pulp and paper firms will have been established, for a total of $950 million in program credits. This will improve the environmental performance of the industry by reducing the quantity of energy consumed by 4,230,000 GJ/year and increasing the quantity of renewable energy produced by 2,100,000 MWH/year, which will lay the groundwork for a more competitive and sustainable future.

| Priority: **Managing Nuclear Issues** | **Supports SO # 1 & 2** | **Ongoing Priority** |
|---|---|---|

**Why is this a priority?**

Nuclear energy plays a critical role in Canada's energy mix. The government's nuclear policy is driven by three overarching objectives: (i) meeting Canada's energy and environmental needs safely, economically and reliably; (ii) reducing costs and risks for taxpayers while maximizing returns on Canada's investments in the nuclear industry; and (iii) positioning Canada's nuclear industry to seize domestic and global opportunities. There is also a need to increase the security of medical isotopes supply to meet the health needs of Canadians and reduce environmental impacts.

**What are the plans for meeting this priority?**

NRCan will deliver on this priority in partnership with key entities within the Minister's portfolio and other government departments. In particular, NRCan will continue to implement the announced restructuring of Atomic Energy of Canada Limited (AECL) to reduce taxpayers' exposure to commercial risks and costs while positioning Canada's nuclear industry to take maximum advantage of domestic and international opportunities. Efforts will be geared towards reaching an agreement with a purchaser for the divestiture of AECL's Commercial Reactor Division, as well as managing funding pressures in order to preserve the value of the asset and limit the risks for taxpayers. NRCan will also continue to look at the long-term mandate and possible options for AECL National Laboratories. The department will support AECL in its efforts to renew its infrastructure to meet health, safety, security and environmental requirements, and develop advanced CANDU reactor designs.

Together with Health Canada, NRCan will work to ensure that Canadians have a secure supply of medical isotopes by investing in research, development and demonstration of new technologies.

Finally, NRCan will continue to manage the government's radioactive waste liabilities.

**Commitments for 2011-12**

Finalize the divestiture of AECL's Commercial Reactor Division.

Implement expected Government decisions with respect to the restructuring of AECL's National Laboratories.

Support research and development of non-reactor-based technologies for the production of medical isotopes through the funding for the Non-reactor-based Isotope Supply Contribution Program (NISP) and complete reports on the technical and commercial viability of the isotope technologies.

Meet the government-approved program milestones for the second phase of the Nuclear Legacy Liabilities Program, including the building and infrastructure decommissioning and radioactive waste cleanups at the AECL sites.

Facilitate future implementation of the Port Hope Area Initiative (a program to clean-up historic radioactive waste) by obtaining proper approvals and regulatory authorities.

| Priority: **Advancing Sustainable Resource Development in the North** | **Supports SO # 1 & 3** | **Ongoing Priority** |
|---|---|---|

**Why is this a priority?**

Key objectives of the government are to realize the vast potential of Canada's North, strengthen Canada's sovereignty and promote northern economic and social development, which requires private sector investment. NRCan is supporting the industry in making informed and effective investment decisions by providing improved landmass, offshore and resource information.

**What are the plans for meeting this priority?**

NRCan is working with Indian and Northern Affairs Canada to develop a Northern Strategy for resource development, particularly for minerals and metals. This work will include areas such as the Mineral and Energy Resource Assessment process, climate change and adaptation and improving regulatory process North of 60 through the Canadian Northern Economic Development Agency. The Geo-mapping for Energy and Minerals Program will continue to fill the knowledge gaps and provide the fundamental geoscience information to governments, communities and the private sector so that they can use it to make strategic decisions related to new energy and mineral resources in the North.

The department is supporting Canada's submission to the United Nations Convention on the Law of the Sea (UNCLOS) to extend the country's sovereign rights on the Atlantic and Arctic continental margins by mapping the continental shelf. NRCan is also providing logistical support for Arctic geoscience and research, and completing the topographic mapping of the North.

**Commitments for 2011-12**

Develop Northern Strategy related to minerals and metals development.

Conduct high resolution geophysical surveys to fill knowledge gaps and provide governments, communities and industry with fundamental geoscience required to make strategic investment decisions in new energy and mineral resources in the North.

Complete annual land claim survey obligations as defined in the legislation and agreements for the Yukon, North West Territories (NWT) and Nunavut.

Provide the final set of coordinates for the outer limits of Canada's Atlantic and Arctic offshore continental shelf (UNCLOS).

Compile 500 new topographic maps at 1:50 000 scale covering parts of NWT and Nunavut.

Support the implementation of the Action Plan to Improve the North's Regulatory Regimes, and the effective establishment of the Northern Projects Management Office, to ensure a consistent approach to project reviews across the country.

**Management Priority**

| Priority: **Integrated Management** | **Supports all SOs** | **Ongoing Priority** |
|---|---|---|

**Why is this a priority?**

NRCan's success is dependent on the relevance of its programs and the way they are managed to ensure effectiveness and efficiency. Support provided by internal services serves to build and sustain capacity, align resources and integrate management practices to continuously renew how we do things (e.g., our business processes) and ensure the effective and efficient use of resources and their alignment with priorities.

| Priority: **Integrated Management** | **Supports all SOs** | **Ongoing Priority** |
|---|---|---|

**What are the plans for meeting this priority?**

Continue to improve NRCan's integrated business planning process, including strengthening performance and risk management and improving the governance structure, to ensure the relevance of our programming and allow for greater integration and management of our outcomes and performance. The renovation of the Program Activity Architecture will allow for better attribution of results and more effective reporting on performance – ensuring transparency to Parliament and Canadians. The implementation of a comprehensive risk management framework will support strengthened risk management across the department. The improvements to the governance structure will support stronger integration, support the development of concrete measures to transform business processes and contribute to building a culture of collaboration and collective leadership. The implementation of Felix/SAP should facilitate the integration of these initiatives and enhance key business processes.

The department is also focused renewing and growing our human capital by recruiting more strategically and supporting development to maximize the contribution and growth of our people. For example, the alignment of recruitment initiatives to identified needs and priorities will support the achievement of our outcomes and will address identified skills shortages. To that effect, a particular focus will be placed on strengthening our capacity in science and technology to ensure our ability to deliver in the longer term. Building on an effective executive performance and talent management process, further emphasis will be placed on the management of our talent through the establishment of a comprehensive leadership development framework. The Key NRCan Competencies of organizational awareness, collaboration, innovation and flexibility will increasingly be ingrained into our talent management culture and integrated into our recruitment, learning, leadership development, performance management and recognition strategies.

**Commitments for 2011-12**

Implement a revised governance structure to ensure the integration and ongoing renewal of risks, human, asset, and information resources through the planning, ongoing monitoring and reporting of activities.

Support implementation of the renewed Program Activity Architecture, the Performance Measurement Framework, and Risk Management Framework.

Implement Felix/SAP to support improved business processes for financial, materiel and project management. Leverage the new system to better track financial and non-financial performance through quarterly reviews.

Focus HR strategies on business needs, including the implementation of a departmental approach to performance management and the design and implemention of targeted initiatives to recruit and develop S&T professionals.

Implement an organizational code (Values & Ethics) based on the principles of the new federal Public Service Code of Conduct.

Implement 2011-2016 Action Plans for Official Languages and Employment Equity.

Implement a re-engineered Access to Information process to ensure timely and continuous review of active requests and, if necessary, resolve delays to ensure commitments to meet processing times.

## Expenditure Profile

**Voted and Statutory Items ($ millions)**

| Voted or Statutory Items | Truncated Vote or Statutory Wording | Main Estimates 2010-11 | Main Estimates 2011-2012 |
|---|---|---|---|
| 1 | Operating expenditures | 805.9 | 569.9 |
| 5 | Capital | 15.1 | 13.9 |
| 10 | Grants and Contributions | 1877.6 | 1267.5 |
| (S) | Minister of Natural Resources – Salary and Motor Car Allowance | 0.1 | 0.1 |
| (S) | Contributions to Employee Benefit Plans | 57.6 | 58.7 |
| (S) | Canada-Nova Scotia Development Fund | 0.0 | 0.0 |
| (S) | Canada-Newfoundland Offshore Petroleum Board | 6.5 | 6.8 |
| (S) | Canada-Nova Scotia Offshore Petroleum Board | 3.4 | 3.4 |
| (S) | Payments to the Nova Scotia Offshore Revenue Account | 295.3 | 179.7 |
| (S) | Payments to the Newfoundland Offshore Petroleum Resource Revenue Fund | 1371.2 | 1424.0 |
| (S) | Grant to the Canada Foundation for Sustainable Development Technology | 20.0 | 0.0 |
| (S) | Geomatics Canada Revolving Fund<br>- Operational expenditures<br>- Respendable revenue | <br>1.9<br>-1.9 | <br>2.0<br>-2.0 |
| **Main Estimates** | | **4452.7** | **3524.0** |

The graph below illustrates the departmental spending trend for the period 2007-08 to 2013-14. Key points to note include:

**Programs:**

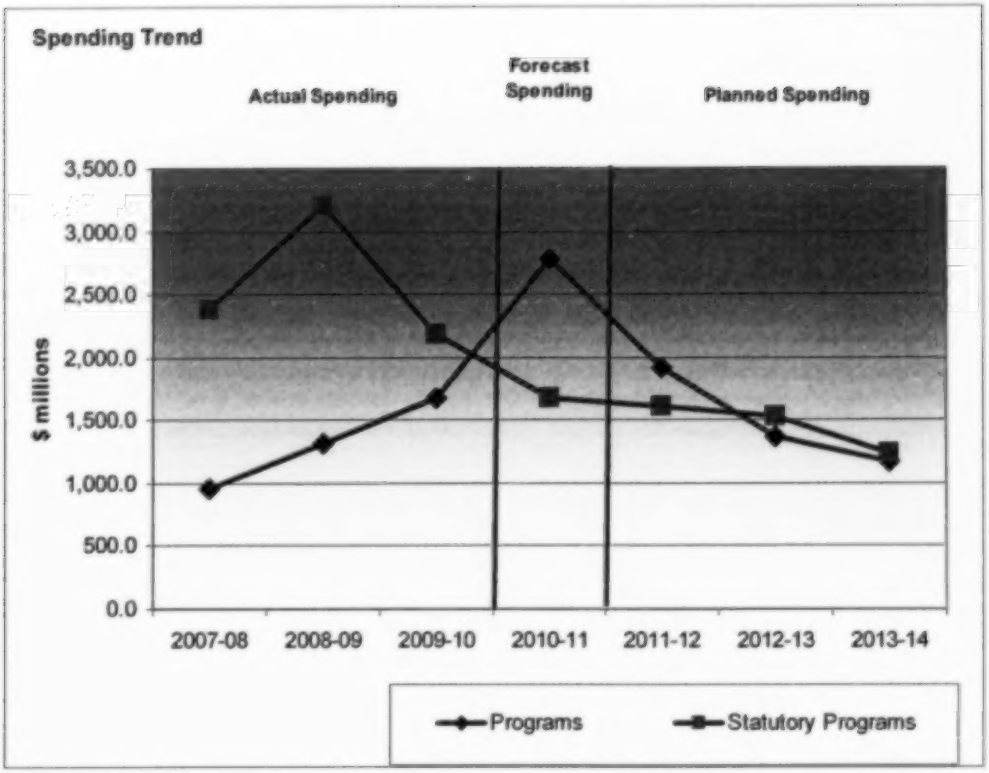
- Program spending increased from 2007-08 to 2010-11, and is decreasing for subsequent years. This is due to the completion of many of Canada's Economic Action Plan initiatives and the sunsetting of Clean Air Agenda programs.
- Planned spending increases for 2010-11 are attributed primarily to the Pulp and Paper Green Transformation Program, which was allocated $800 million in 2010-11 (up from $200 million in 2009-10). Other increases are related to the CANMET Materials Technology Laboratory Relocation Program, the Clean Energy Agenda, the Forestry Market Diversification and Innovation programs, the Clean Energy Fund, the ecoENERGY for Biofuels Program, the Modernizing Federal Laboratories Program, the grant to Sustainable Development Technology of Canada (SDTC), the Nuclear Legacy Liabilities Program and Collective Bargaining.
- Planned spending decreases for 2011-12 are attributed to sunsetting or reduced funding for the ecoENERGY Retrofit – Homes program, the Nuclear Waste Legacy Liabilities program, Investing in Canada's Forest Sector Initiative, Clean Energy Agenda, the Pulp and Paper Green Transformation program, the Modernizing Federal Laboratories Initiative, the ecoENERGY Technology Initiative, grants to Sustainable Development

Technology Canada, the ecoTransport Strategy, the Clean Energy Fund, and Strategic Review. These decreases are partially offset by increases to the ecoENERGY for Renewable Power, Investments in Forest Industry Transformation Program, Isotopes Supply Initiative, and the Port Hope Area Initiative.

- Planned spending decreases for 2012-13 are attributed to sunsetting or reduced funding for the ecoENERGY Technology Initiative, the CANMET Materials Technology Laboratory Relocation program, the Adaptation Theme for the Clean Air Agenda, the ecoENERGY for Biofuels Program, the Isotopes Supply Initiative, and the Pulp and Paper Green Transformation Program.
- Planned spending decreases for 2013-14 are attributed to sunsetting or reduced funding for the Clean Energy Fund, Geo-mapping for Energy and Minerals Program and the ecoENERGY for Biofuels Program.

**Statutory Programs:**

- Statutory payments under various Atlantic Offshore Accords are based primarily on oil and gas royalty revenues received which are affected by both the price of oil and production levels. The increase in actual expenditures is largely a result of the significant increase in oil prices experienced in the 2007-08 and 2008-09 fiscal years. The anticipated spending decrease and subsequent reduction in planned spending for 2009-10 and subsequent years reflects the latest forecast of oil price and production levels: the federal government expects to collect offshore-related revenues at a level similar to that prevailing in the years prior to 2007-08.




## Estimates by Vote

Estimates by Vote are presented in the 2011–12 Main Estimates which are available here: http://www.tbs-sct.gc.ca/est-pre/20112012/me-bpd/info/info-eng.asp.

## Section II: Analysis of Program Activities by Strategic Outcomes

| Government of Canada Outcome: Strong Economic Growth | |
|---|---|
| **Strategic Outcome 1: Economic Competitiveness**<br>Natural resource sectors are internationally competitive, economically productive and contribute to the social well-being of Canadians | |
| **NRCan Priorities** | Enabling Competitive Resource Sectors |
| | Advancing Clean Energy |
| | Managing Nuclear Issues |
| | Advancing Sustainable Resource Development in the North |

**Basic Facts – Strategic Outcome 1**

| Planned Spending | Program $K | Statutory $K | FTEs |
|---|---|---|---|
| 2011-12 | 185,479 | 1,613,870 | 910 |
| 2012-13 | 163,841 | 1,474,733 | 902 |
| 2013-14 | 142,525 | 1,233,176 | 876 |

NRCan works to promote innovation, investment, and the enhancement of the competitiveness of Canada's natural resources and related products industries through the provision of know-how and tools, including base geo-science information, along with trade promotion and market acceptance, at home and abroad. The department delivers policies, regulations and legislative work to manage federal responsibilities associated with Canada's oil and natural gas supply, protecting the critical energy infrastructure, and managing statutory programs for the Atlantic offshore. Work is also undertaken to improve the social-well being of Canadians by focusing on communities that have a substantial reliance on resource-based industries, and to improve overall knowledge, capacity and opportunities for these communities through the provision of value-added products and services.

The performance of these programs and activities will be measured by the following indicators. In all cases, targets are a favourable trend over the long term, but some indicators – as noted with an * – may respond to other influences more immediately (e.g. world and domestic economic growth, the activities of other levels of government, etc.)
(Note: Program Activity 1.2 – Natural Resource-based Communities has been merged with Program Activity 1.1 – Economic Opportunities for Natural Resources. Performance measures and details on our work to achieve them reflect this)

| Levels | Outcome / Expected Results | Performance Indicators | Targets |
|---|---|---|---|
| Strategic Outcome 1 | Natural resources sectors are internationally competitive, economically productive, and contribute to the well-being of Canadians | Canada's share of resource-based world trade (rank position)*<br>Measure A: Canada's Trade Performance Index (TPI) for wood, wood products & paper relative to all nations<br>Measure B: TPI for minerals (includes energy and power) relative to all nations | Favourable 5-year trend in rank position |
| Program Activity 1.1<br>Programming in this area contributes to Air Quality and Climate Change, and the Protecting Nature Themes of the FSDS** | Competitive national and international markets, stable economic opportunity, and investment in natural resources | Capital investments and exploration investments in the resource sector (in $billions)*<br>Measure A: Forestry: new capital investment<br>Measure B: Mines: complex development investments (for new or existing mines)<br>Measure C: Mines: exploration investments<br>Measure D: Energy: new capital investment | Favourable 5-year trend in billions of dollars |
| | | Diversity of Canada's wood products exports*<br>Measure: Herfindahl index for markets (measuring Canada's success in diversifying its wood product exports away from one core market (i.e., the United States) towards offshore markets over time). | Favourable 5-year trend |
| | | Performance of programs in achieving expected results within plans, timelines and budgets (in percentage)<br>Measure: Summation of success in delivering sub-activity-level expected results and outputs on time; weighted by planned spending (and adjusted as necessary for spending variances) | Greater than 99% of programs delivered on plan, on time, and within budget |

** For full information on NRCan's contributions to the Federal Sustainable Development Strategy, see RPP electronic layer of Sustainable Development Reporting

| 1.1 Economic Opportunities for Natural Resources | Planned Spending | Program $K | Statutory $K | FTEs |
|---|---|---|---|---|
| | 2011-12 | 185,479 | 1,613,870 | 910 |
| | 2012-13 | 163,841 | 1,474,733 | 902 |
| | 2013-14 | 142,525 | 1,233,176 | 876 |

**NRCan Priority: Enabling Competitive Resource Sectors**

NRCan works to foster a competitive forest sector by generating increased value from forest resources through innovation and by reducing barriers to trade. NRCan invests in and carries

out research to advance the competitiveness of the sector through product and process innovation and value-added product development and to stimulate more efficient forest inventory tools, with the aim of extracting more value from Canada's forests. The department also supports initiatives to reinforce Canada as a sustainable and responsible forest nation, while promoting the environmental credentials of Canada's forest products to key influencers and international consumers of those products.

*Commitments for 2011-12:* Demonstrate the application of advanced forest inventory tools in two forest management units of several thousand hectares in size to produce more accurate forest inventories and provide more information on wood quality value. This added information will enable higher value utilization of forest resources.

Through the Investments in Forest Industry Transformation program, develop contribution agreements with eligible forest product companies that will lead to the implementation of new and advanced technologies (e.g., bioenergy, biomaterials, biochemicals, and next generation building products) that direct forest fibre and by-products into a more diversified, higher-value product mix.

Through the Leadership for Environmental Advantage in Forestry Initiative, provide 10 science-based information products to forest sector stakeholders (e.g., Canadian wood product producers and related industry associations) that address key environmental reputation and market acceptance issues.

The competitiveness of the Canadian forest sector can be enhanced by integrating and coordinating the various institutions that fund and perform forest research and development (i.e., the forest sector innovation system). The department provides national leadership to improve the integration and priority-setting in the forest sector innovation system by developing partnerships and strengthening institutional arrangements among forest research and development performers (e.g., FPInnovations and universities), funders (e.g., Natural Sciences and Engineering Research Council), and governments.

*Commitments for 2011-12:* Working with Statistics Canada, conduct an analysis of the capacity of the forest sector innovation system to address sector priorities through research and development.

Develop a performance assessment framework to assess the impact of the department's forest science knowledge on the forest sector innovation system.

NRCan is working to sustain economic viability of mineral resources in many communities, through the identification of potential new areas of economic mineral resources. The Targeted Geoscience Initiative 4 (TGI-4), delivered in collaboration with partners, addresses the gaps in our understanding of mineral systems that form Canada's major deposit types. It provides geoscience knowledge on the entire mineral system, including exploration models that can be used as a guide to determine appropriate exploration areas, contributing to economic opportunities in communities. Exploration risks are high for the mining industries, and NRCan works to provide accessible and reliable geological information in order to attract investments and mitigate the risks of investments through the use of appropriate strategies for development.

*Commitments for 2011-12:* As part of TGI-4, sign eight collaborative arrangements with provincial, territorial, academia and industrial partners.

Deliver tools such as exploration modeling in order to optimize effectiveness in exploring for a certain deposit type. This includes the geological, geochemical and geophysical characteristics of the desired mineral and its surrounding environment.

Furthermore, NRCan has put in place programming to support a competitive investment climate, create technologies that add value and minimize potential downsides to minerals' and metals' production and use, and to ensure continued access to global markets and resources. This is achieved by providing information and knowledge through conferences, investment seminars with Provinces and Territories, participating in multilateral forums, and by engaging industry and others to transfer knowledge and technology. Support for the minerals and mining sector will also be provided through the implementation of a corporate social responsibility strategy and by addressing other challenges, including declining base metal reserves.

*Commitments for 2011-12:* Conduct specialized research work with partners to improve mine productivity through reduced energy costs, more efficient processes, and improved health and safety.

Develop a base-metal strategy action plan to identify and develop new base-metal resources in existing mining camps, remote areas and in the North.

Complete reports on an *Overview of Trends in Canadian Mineral Exploration* and *comparative international tax study for base metals.*

Undertake a review of the Aboriginal toolkit to determine its effectiveness and initiate work to better understand opportunities for Aboriginal people in mining.

The newly relocated CANMET Materials Technology Laboratory (MTL) at the McMaster Innovation Park in Hamilton, Ontario, will enhance our work with industry and academia on productivity issues, through research and commercialization of new or improved materials and processes.

*Commitments for 2011-12:* Complete the CANMET-MTL building in compliance with LEED Platinum requirements.

In response to capacity reductions and loss of jobs in the forest sector, NRCan develops strategies to enable communities to take advantage of emerging economic opportunities. Through community, regional and national partnerships and investments, the Forest Communities Program supports community-based business development and educational initiatives; develops innovative forest science, knowledge, tools and best practices in sustainable forest development and integrated landscape management; and encourages sharing of knowledge, tools and sustainable forest management practices and strategies domestically and internationally in Latin America, Europe, Asia, Africa and Russia.

*Commitments for 2011-12:* Develop and implement the new Aboriginal Forestry Initiative.

Develop and disseminate more than 50 knowledge products, tools and strategies associated with the Forest Communities Program.

**NRCan Priority: Advancing Clean Energy**

NRCan undertakes a number of policy, regulatory, research, and legislative-based activities to ensure the sustainable development of Canada's energy resources while promoting energy

security and economic prosperity. To deliver on the government's core responsibilities, the department provides expert advice on petroleum regulations and policy, clean energy policy, the demonstration of carbon capture and storage, and the maintenance of an adequate, reliable and environmentally sustainable supply of electricity at competitive prices.

*Commitments for 2011-12:* Position Canada's energy interests at key international fora and international climate change negotiations, such as the United Nations Framework Convention on Climate Change and the APEC Energy working group meeting.

Provide advice, recommendations and analysis on international energy issues, most notably with the US through the Canada-US Energy Consultative Mechanism, the Clean Energy Dialogue, and the North American Energy Working Group.

NRCan supports the development of new sources of energy, which are pivotal to meeting Canada's long-term energy requirements and sustainable economic growth through a diverse mix of energy supply. The department is working to better understand unconventional sources of energy and their potential to become proven and useable sources of energy. The New Energy Supply program provides relevant data, information and knowledge on unconventional and renewable resources such as shale gas, gas hydrates, geothermal and tidal energy, as well as offshore energy sources to encourage private sector interest and development activities. The department is also working to advance carbon capture and storage, including the safe and secure underground storage of CO2.

*Commitments for 2011-12:* Publish an evaluation of geothermal energy potential.

Publish a study on geological parameters impact assessment for carbon storage. Contribute to the design and implementation of CO2 geological storage projects (through the International Energy Agency Weyburn-Midale CO2 Monitoring and Storage Project).

Provide the Canadian component of the North American Carbon Storage Atlas.

**NRCan Priority: Managing Nuclear Issues**

NRCan oversees Canada's nuclear energy regulatory framework and supports Atomic Energy of Canada Limited's (AECL) efforts toward the renewal of its research and development capacity, infrastructure, and the development of the advanced CANDU reactor. NRCan will continue to implement the restructuring of AECL and will finalize the divestiture of its commercial reactor division, thereby reducing taxpayers' exposure to commercial risks and costs while positioning Canada's nuclear industry to take maximum advantage of domestic and international opportunities. With the National Research Universal (NRU) reactor now back in service, NRCan will manage funding pressures in order to preserve the value of the asset and limit the risks for Canadians, while considering the long-term mandate and possible options for AECL National Laboratories. Together with Health Canada, NRCan will work to ensure that Canadians have a secure supply of medical isotopes.

*Commitments for 2011-12:* Continue to address AECL funding pressures through the divestiture of the AECL Commercial Reactor Division and the restructuring of AECL National Laboratories to limit the risks for taxpayers.

Reach an agreement with a purchaser for the divestiture of AECL's commercial reactor division.

Complete the Non-reactor-based Isotope Supply Contribution Program and report on the technical and commercial viability of the isotope production technologies.

**NRCan Priority: Advancing Sustainable Resource Development in the North**
The Geo-mapping for Energy and Minerals (GEM) program provides governments, communities and industry with fundamental geoscience required to make strategic decisions. The area represents an untapped resource for mineral and energy supply, and requires the use of modern techniques to acquire geophysical and geochemical data to encourage industry to make major investments in exploration. In collaboration with territorial governments and First Nations, GEM is focused on updating and disseminating geological data, information and knowledge on priority areas to identify the potential locations of various mineral and energy types. NRCan's geoscience information and understanding of local priorities and practices in the North further support industry exploration investment.

*Commitments for 2011-12:* Conduct high resolution geophysical and geochemical surveys, and geological mapping to fill knowledge gaps in the North.

Undertake community-level consultations and information sessions to better target GEM priorities to local community needs for economic development, combined with territorial and provincial regional development priorities and industry development priorities for exploration investments.

## Benefits for Canadians

The natural resource sectors are a strong engine of Canada's economy, economic growth and job creation. NRCan is working to support the Canadian natural resource sectors and the communities as these sectors evolve, adapt and grow. Stronger natural resources sectors will mean increased prosperity for Canada and Canadians.

| Government of Canada Outcome: A Clean and Healthy Environment | |
|---|---|
| **Strategic Outcome 2: Environmental Responsibility**<br>Canada is a world leader on environmental responsibility in the development and use of natural resources | |
| **NRCan Priorities** | Enabling Competitive Resource Sectors |
| | Advancing Clean Energy |
| | Managing Nuclear Issues |
| | Advancing Sustainable Resource Development in the North |

NRCan develops and delivers energy science and technology, policies, programs, legislation and regulations to mitigate greenhouse gas emissions and to reduce other environmental impacts associated with energy production and use. The department also delivers programs that help to understand the risks to our environment and the protection of critical resources such as groundwater and Canada's forests.

| Basic Facts – Strategic Outcome 2 | | |
|---|---|---|
| **Planned Spending** | **Program $K** | **FTEs** |
| 2011-12 | 1,414,277 | 1,215 |
| 2012-13 | 989,772 | 1,057 |
| 2013-14 | 754,219 | 1,056 |

The performance of these programs and activities will be measured by the following indicators. In all cases, targets are a favourable trend over the long term, but some indicators – as noted with an * – may respond to other influences more immediately (e.g. world and domestic economic growth, the activities of other levels of government, etc.)

| Levels | Outcome / Expected Results | Performance Indicators | Targets |
|---|---|---|---|
| Strategic Outcome 2 | Canada is a world leader on environmental responsibility in the development and use of natural resources | Canada's total annual energy savings due to efficiency* (in petajoules [PJ])<br>Measure: Difference between energy use without energy efficiency improvements and energy use with energy efficiency improvements | Favourable 5-year trend in PJ saved |
| | | Contribution to advancement of innovative and environmentally responsible practices in the resource sector measured by uptake of knowledge, technologies, and demonstration projects<br>Measure: Number of peer-reviewed publications by NRCan in this field. | Favourable long-term trend in number of publications |

| Levels | Outcome / Expected Results | Performance Indicators | Targets |
|---|---|---|---|
| Program Activity 2.1<br>  <br>Programming in this area contributes to Air Quality and Climate Change Theme of the FSDS** | Increased energy efficiency, increased production of low-emission energy, and reduced environmental impacts associated with energy production and use | Clean energy production and greenhouse gas (GHG) reductions attributable to NRCan programming (in megatonnes of carbon dioxide [CO2] equivalents)<br>Measure A: Cumulative GHG reductions attributable to NRCan's ecoENERGY efficiency programming<br>Measure B: Cumulative GHG reductions attributable to NRCan's ecoENERGY renewables programming | Favourable long-term trend in megatonnes of CO2 equivalents |
| | | Natural Resources Canada's contribution to advancement of clean energy knowledge, and uptake of innovative clean energy solutions<br>Measure: Number of peer-reviewed publications by NRCan in this field. | Favourable long-term trend in number of publications |
| | | Performance of programs in achieving expected results within plans, timelines and budgets (in percentage)<br>Measure: Summation of success in delivering sub-activity-level expected results and outputs on time; weighted by planned spending (and adjusted as necessary for spending variances) | Greater than 99% of programs delivered on plan, on time, and within budget |
| Program Activity 2.2<br>  <br>  <br>  <br>Programming in this area contributes to Air Quality and Climate Change, Protecting Nature, and Water Quality and Availability Themes of the FSDS ** | Canada understands and mitigates risks to natural resource ecosystems and human health | NRCan's contribution to federal environmental assessments, mineral and energy resource assessments for proposed protected areas on federal lands and waters, and related reporting processes<br>Measure A: NRCan's participation in Canadian Environmental Assessment Act (CEAA) Panel reviews (number of Panel Reviews active at NRCan during the fiscal year)<br>Measure B: NRCan's participation in CEAA Comprehensive Studies (number of Comprehensive Studies active at NRCan during the fiscal year)<br>Measure C: NRCan's contribution to the federal Government's Mineral and Energy Resource Assessments (MERA) (number of MERA active during the fiscal year) | Fulfilling on-demand requirements |
| | | NRCan's contribution to advancement of ecosystem knowledge, and innovative ecosystem risk management solutions<br>Measure: Number of peer-reviewed publications by NRCan in this field. | Favourable long-term trend in number of publications |

| Levels | Outcome / Expected Results | Performance Indicators | Targets |
|---|---|---|---|
| | | Performance of programs in achieving expected results within plans, timelines and budgets (in percentage)<br>Measure: Summation of success in delivering sub-activity-level expected results and outputs on time; weighted by planned spending (and adjusted as necessary for spending variances) | Greater than 99% of programs delivered on plan, on time, and within budget |

** For full information on NRCan's contributions to the Federal Sustainable Development Strategy see RPP electronic layer of Sustainable Development Reporting

| 2.1 Clean Energy | Planned Spending | Program $K | FTEs |
|---|---|---|---|
| | 2011-12 | 1,327,303 | 796 |
| | 2012-13 | 890,405 | 642 |
| | 2013-14 | 661,975 | 641 |

**NRCan Priority: Advancing Clean Energy**

The government has recognized the key role clean energy can play in the shift to a lower carbon economy, simultaneously providing economic and environmental benefits to Canadians. NRCan's work and activities aim to achieve this objective in the short and long term by encouraging energy efficiency, increasing the availability of renewable energy, and supporting the development and use of cleaner fossil fuels and alternatives. The department conducts research and provides scientific expertise on clean energy technology while providing leadership and acting as a catalyst for accelerated clean energy innovation in Canada.

Through a variety of mechanisms, NRCan works with federal, provincial, industry and academic partners to develop and encourage research and demonstration on and the deployment of clean energy systems for buildings and communities; clean electric power generation; clean energy systems for industry; clean transportation energy; environmentally sustainable oil and gas development; and bioenergy. NRCan's efforts contribute to improving energy efficiency in every sector of the economy – homes, commercial buildings, vehicles – and increase the production of low-impact renewable energy. The following programs and initiatives achieve this:

- The Clean Energy Science and Technology programming supports research, development and the demonstration of the next-generation clean-energy technologies and systems, including increasing clean energy supply and renewable energy from clean sources such as wind, solar, tidal and biomass. Initiatives are also undertaken to increase efficiency and reduce pollution from conventional energy sources, such as research on cleaner fossil fuels, oil sands development, and carbon capture and storage. The Clean Energy Science and Technology programming is funded in part by ecoENERGY Technology Initiative and the Clean Energy Fund.

*Commitments for 2011-12:* Undertake competitive processes to select the most promising clean energy technology projects including the review and approval of proposals.

Establish and maintain partnerships with external public and private stakeholders through contracts and contribution agreements to cost-share clean-energy technology projects.

Review and assess progress and results for current and new projects related to clean energy science and technology.

- The ecoENERGY for Renewable Power program diversifies Canada's energy mix by providing production incentives to producers of renewable electricity. Programming has been instrumental in increasing the supply of renewable electricity – e.g. wind, biomass, low-impact hydro, geothermal, solar photovoltaic and ocean energy – to the electrical grid.

  *Commitments for 2011-12:* Manage over 100 contribution agreements under the ecoENERGY for Renewable Power program.

  Follow up on Environmental Assessments completed on approved ecoENERGY for Renewable power projects to ensure compliance.

  Perform technical site visits for approved ecoENERGY for Renewable Power projects

- The ecoENERGY for Biofuels program, which supports the production of renewable alternatives to gasoline and diesel, and encourages the development of a competitive renewable fuels industry in Canada by providing incentives directly to new and existing producers.

  *Commitments for 2011-12:* Monitor up to 38 legal agreements with existing or new producers representing 2 billion litres of domestic production of renewable alternatives to gasoline and 500 million litres of domestic production of renewable alternatives to diesel[2].

- The Advanced Materials for Transportation Program and the Materials for Nuclear and Conventional Energy Program develop, in partnership with universities and industry, advanced materials, technologies and processes that improve energy efficiency and enable clean energy systems. Research advances will benefit the nuclear reactor and the automotive sectors, leading, for example, to a next generation of vehicles that are stronger and lighter, thereby reducing fossil fuel consumption and contributing to the reduction of GHG emissions, as well as to high-efficiency next-generation nuclear reactors that can produce clean electricity.

  *Commitments for 2011-12:* Develop a prototype engine with high temperature resistant aluminum alloy. Launch a university-industry-federal lab collaborative project to design, fabricate, assemble and test a magnesium intensive demonstration

[2] For more information on renewable alternatives to gasoline and diesel please visit the following website: http://www.oee.nrcan.gc.ca/transportation/alternative-fuels/index.cfm?attr=16

structure. Develop a short list of candidate GEN IV alloys for materials assessment and testing.

Finally, NRCan is working to enhance the environmental and commercial sustainability of the pulp and paper industry through the Pulp and Paper Green Transformation Program. Through this program, NRCan supports investments in Canadian pulp and paper mills that will improve the environmental performance of the industry, while also laying the groundwork for a more competitive and sustainable future.

*Commitments for 2011-12:* Provide financial contributions to eligible pulp and paper mills to support capital investments that will result in the generation of environmental benefits for Canadians, including a 4,230,000 GJ/year reduction in quantity of energy consumed and a 2,100,000 MWH/year increase in quantity of renewable energy produced.

With the conclusion of PPGTP at the end of 2011-12, contribution agreements with 25 participating pulp and paper firms, will have been established, for a total of $950 million in program credits.

## Benefits for Canadians

NRCan helps Canadians improve energy conservation and energy efficiency in multiple sectors of the economy (e.g. homes, commercial buildings, vehicles and fleets), contributing to the longer term sustainability and reducing the short-term costs of energy consumption. The department is working to reduce the environmental impacts associated with the production and use of energy, and to increase the production of low-impact renewable energy, thereby advancing the environmental sustainability efforts that will benefit current and future generations.

| | Planned Spending | Program $K | FTEs |
|---|---|---|---|
| **2.2 Ecosystem Risk Management** | 2011-12 | 86,975 | 419 |
| | 2012-13 | 99,367 | 415 |
| | 2013-14 | 92,243 | 415 |

**NRCan Priority: Enabling Competitive Resource Sectors**

Through the Green Mining Initiative – a multi-stakeholder partnership – NRCan develops, identifies and promotes the use of green technology in mining, with the objective of enabling a competitive and greener resource sector. Research and outreach activities aim to reduce ecosystem risks from mining and encourage and improve sustainable best practices. Focus for the next year will be on four main research themes: footprint reduction; mine waste management; mine closure and rehabilitation; and ecosystem risk management.

*Commitments for 2011-12:* Produce 15 R&D publications on environmental technologies.

Complete 10 projects with industry and government stakeholders on green mining.

Engage in 10 Ground Control, safe mining or innovative projects.

The scope of these projects includes: (1) reducing the risks related to mining at a great depth to access mineral deposits and improving the productivity of Canadian mining

operations; (2) developing innovative technologies on the effect of heat stress on mine workers; and, (3) developing and testing processes for long term storage of radioactive wastes in Canada.

NRCan provides knowledge and expertise of the impacts on the environment and ecosystems of resource development (both renewable and non-renewable) in order to develop projects in a sustainable and environmentally responsible manner and create federally protected areas. Through the Mineral and Energy Resource Assessments, the department informs decision-making on the establishment of national parks and other protected areas. NRCan also contributes to environmental assessments for natural resources projects, as required under the Canadian Environmental Assessment Act and for all federally triggered or regulated projects/reviews, through the delivery of science and technology and the provision of analysis and expertise to government departments, regulatory bodies, and industry.

*Commitments for 2011-12:* Publish 15 R&D publications related to the environmental assessment process for natural resources development and use.

Respond to requests for expertise and advice on projects that require environmental assessment review under the federal CEAA process or under a territorial EA regime with federal input.

Provide comments in a timely manner for federal environmental assessment reviews and deliver as requested Mineral and Energy Resource Assessments.

The department is working with its partners on the assessment and mapping of key aquifers. Information from this is distributed with a view to ensure the sustainable management of groundwater resources and the responsible development of Canada's lands.

*Commitments for 2011-12:* In collaboration with the provinces and territories, complete and produce the assessment and mapping of new two Canadian Aquifers.

NRCan will continue to develop forest ecosystem knowledge and predictive tools that are critical to understanding the nature and extent of Canada's forests and how they are changing over time as a result of natural and human-caused disturbances, particularly in view of a changing climate.

*Commitments for 2011-12:* Update and make accessible National Forest Information products, including databases and maps to governments, industry, non-governmental organizations and the public.

Provide estimates of forest-related greenhouse gas (GHG) emissions to meet Canada's international reporting commitments.

Comprehensively review the state of science on Canada's boreal zone and its ecosystems, with particular emphasis on ecosystem health and sustainability.

These commitments will increase our understanding of national forest processes and enhance Canada's environmental reputation and increase market access.

**NRCan Priority: Managing Nuclear Issues**

NRCan is working to mitigate risks to the environment and human health through the Radioactive Waste Management programs. These include the Nuclear Legacy Liabilities

Program, which is implementing a long-term strategy to decommission legacy infrastructure and restore affected lands at AECL sites, including the implementation of long-term solutions for the management of associated wastes; as well as ongoing efforts for the clean-up of historic wastes in the Port Hope (Ontario) area and elsewhere in Canada.

*Commitments for 2011-12:* Meet the government-approved milestones for the second phase of the Nuclear Legacy Liabilities Program, including the building and infrastructure decommissioning and radioactive waste cleanups at the AECL sites.

Facilitate future implementation of the Port Hope Area Initiative by obtaining proper approvals and regulatory authorities.

Develop, optimize and validate a leaching scheme to extract key elements from radioactive wastes to dispose of these while meeting Canada's environmental needs safely.

**NRCan Priority: Advancing Sustainable Development of the North**
NRCan is conducting research to better understand the impact of energy and mineral development on the Northern environment. The objective is to develop methods and approaches to assess the potential impacts of the development of oil, gas and mineral resources on the Arctic environment. Ongoing activities include the impact of pipeline construction on the stability of permafrost.

*Commitments for 2011-12:* Initiate a research project to provide guidelines to stakeholder on assessing the environmental impacts of strategic mineral resources in the Arctic (project to be completed by 2014).

Develop a Northern Strategy, in collaboration with Indian and Northern Affairs Canada and Canadian Northern Economic Development Agency, related to minerals and metals development to identify the potential developments, highlight the potential barriers and propose a strategy to address the barriers for moving forward.

## Benefits for Canadians

NRCan's work and expertise creates knowledge that is critical in making decisions on environmental stewardship, conservation and environmental protection. This impacts the health and quality of life of Canadians, as well as the sustainability of their natural resources, now and in the future.

| Government of Canada Outcome: An Innovative and Knowledge-Based Economy | |
|---|---|
| **Strategic Outcome 3: Safety, Security and Stewardship**<br>Natural resource knowledge, landmass and management systems strengthen the safety and security of Canadians and the stewardship of Canada's natural resources and lands | |
| **NRCan Priorities** | Improving the Performance of the Regulatory System for Major Project Reviews |
| | Enabling Competitive Resource Sectors |
| | Advancing Sustainable Resource Development in the North |

**Basic Facts – Strategic Outcome 3**

| Planned Spending | Program SK | FTEs |
|---|---|---|
| 2011-12 | 147,929 | 1,168 |
| 2012-13 | 119,409 | 1,127 |
| 2013-14 | 119,503 | 1,127 |

NRCan provides geoscience and geospatial information that contributes to the reduction of risks from natural hazards, such as earthquakes, tsunamis and flood, as well as hazards arising from human activities, and works with front-line responders to provide geographical information in the event of an emergency. The department also provides accurate and precise geographic information on the Canadian landmass, as well as information that will help Canadians mitigate and adapt to the effects of a changing climate.

Relevant accurate, timely and accessible knowledge is also provided to increase collaborative efforts with other jurisdictions in key areas (e.g., regulatory efficiency) and improve approaches for and management of shared issues. Furthermore, NRCan carries out the Minister's obligation to provide a property rights infrastructure on all lands for which the department has this responsibility.

The performance of these programs and activities will be measured by the following indicators. In all cases, targets are a favourable trend over the long term.

| Levels | Outcome / Expected Results | Performance Indicators | Targets |
|---|---|---|---|
| Strategic Outcome 3 | Natural resource knowledge, landmass and management systems strengthen the safety and security of Canadians and the stewardship of Canada's natural resources and | Contribution to the safety and security of Canadians, and the effectiveness of federal land stewardship and regulatory processes.<br>Measure A: Number of peer-reviewed publications by NRCan in this field.<br>Measure B: Percent of target geomagnetic data posted to the web after quality control by the Canadian Hazard Information Service (CHIS)<br>Measure C: Percent of target seismic data posted to the web after quality control review by CHIS | Favourable long-term trend in number of publications<br>Greater than 90% of landmass and natural hazard data meets timeliness and |

| Levels | Outcome / Expected Results | Performance Indicators | Targets |
|---|---|---|---|
| | lands | Measure D: RADARSAT data reception accuracy within the Earth Observation Data Services system (percent of data at standard) | accessibility standards |
| Program Activity 3.1<br>  <br>Programming in this area contributes to Air Quality and Climate Change Theme of the FSDS ** | Canada adapts to a changing climate and has the knowledge and tools to manage risks associated with natural hazards and hazards arising from human activities | NRCan' contribution to the safe and secure use of explosives in Canada; certifying non-destructive testing personnel in Canada; and materials innovations for the security of individuals.<br>Measure A: Number of inspections and advancement of knowledge in explosives science and technology<br>Measure B: Number of certifications and renewals for Non-Destructive Testing personnel in Canada provided by NRCan's NDT Certifying Agency.<br>Measure C: Number of peer-reviewed publications by NRCan in this field. | Favourable long-term trend in number of publications; sustained or favourable trend in number of inspections and certifications |
| | | NRCan's contribution to climate change adaptation and natural hazard risk management as measured by the uptake of adaptation knowledge and tools, and the timeliness and accessibility of natural hazard risk management knowledge and tools<br>Measure A: Percent of target geomagnetic data posted to the web after quality control by the Canadian Hazard Information Service (CHIS)<br>Measure B: Percent of target seismic data posted to the web after quality control review by CHIS<br>Measure C: Number of peer-reviewed publications by NRCan in this field. | Greater than 90% of natural hazard data meets timeliness and accessibility standards; Favourable long-term trend in number of publications; |
| | | Performance of programs in achieving expected results within plans, timelines and budgets (in percentage)<br>Measure: Summation of success in delivering sub-activity-level expected results and outputs on time; weighted by planned spending (and adjusted as necessary for spending variances) | Greater than 99% of programs delivered on plan, on time, and within budget |
| Program Activity 3.2<br>  <br>  <br>Programming | Government has the necessary natural resources and landmass knowledge and systems required to both govern the country and position Canada to play a leadership | NRCan's contribution to the development and security of Canada through advancements in geographic knowledge, boundary management, and surveys & supporting systems for secure land tenure of Canada Lands.<br>Measure A: Number of peer-reviewed publications by NRCan in this field.<br>Measure B: Boundary management and survey outputs relative to 5-Year Average (dimensionless | Favourable long-term trend in number of publications<br>Fulfilling on-demand requirements |

| Levels | Outcome / Expected Results | Performance Indicators | Targets |
|---|---|---|---|
| in this area contributes to Air Quality and Climate Change, and the Protecting Nature Themes of the FSDS ** | role in federal/provincial/territorial and international fora | number) | |
| | | Effective management of the federal regulatory process for major natural resource projects as measured by adherence to target timelines and service standards by all federal departments and agencies.<br>Measure: Percentage of federal project reviews for major resource projects that are on time or within 8 weeks of the project-specific service standards and target timeline | Greater than 80% of active or completed MPMO projects within eight weeks of target timeline |
| | | Performance of programs in achieving expected results within plans, timelines and budgets (in percentage)<br>Measure: Summation of success in delivering sub-activity-level expected results and outputs on time; weighted by planned spending (and adjusted as necessary for spending variances) | Greater than 99% of programs delivered on plan, on time, and within budget |

** For full information on NRCan's contributions to the Federal Sustainable Development Strategy see RPP electronic layer of Sustainable Development Reporting.

| 3.1 Adapting to a changing climate and hazard risk management | Planned Spending | Program $K | FTEs |
|---|---|---|---|
| | 2011-12 | 63,558 | 552 |
| | 2012-13 | 51,519 | 551 |
| | 2013-14 | 52,231 | 551 |

**NRCan Priority: Enabling Competitive Resource Sectors**

How Canada responds to the changing climate and manages risks from natural and human-induced hazards has a significant impact on the safety and security of Canadians. By developing a greater understanding of hazards, NRCan facilitates government response in times of crisis and informs the development of long-term mitigation strategies, which benefit Canadians and Canada's resource sectors.

The department performs research and provides accurate, objective scientific data to governments and communities to facilitate the understanding of the impacts of a changing climate and influence long-term planning. This information allows for adaptation and forward planning, possibly avoiding future environmental impacts resulting from a change in climate. The dissemination of this information also demonstrates some of the impacts of climate change on the Canadian landscape. As changes in Canada's northern climate will likely have a greater impact than in southern Canada, adaptation measures will need to be carefully designed to preserve Canada's sensitive Arctic and sub-Arctic environments.

*Commitments for 2011-12:* Produce the geoscience information such as papers, presentations and reports that stakeholders use to prepare and build into proactive adaptation plans.

Furthermore, NRCan's work on climate change impacts and adaptation focuses on collaboration to plan and manage the impacts of climate change across Canada. The Tools for Adaptation Program supports the development, dissemination and training on decision-support tools and methodologies for adaptation by various private and public sector stakeholders. The Regional Adaptation Collaborative Program brings decision-makers and subject matter experts from government, the private sector and academia together to assess the impacts of climate change and adaptation responses to effectively address key regional issues.

*Commitments for 2011-12:* Provide support for workshops and presentations to Regional Adaptation Collaboratives focussing on 15 adaptation issues across regions, including areas of water management, community and land use planning.

Develop a nationally applicable climate change vulnerability and adaptation assessment framework for Canada's forests.

NRCan also works (in partnership with and in support of provinces and territories, other departments and agencies, and stakeholders) to manage and mitigate forest disturbances such as pests and wildland fires and impacts from climate change. It does this by coordinating national and intergovernmental research strategies and providing scientific knowledge. This work includes responding to native and naturalized pests (e.g., Eastern Spruce Budworm) and forest invasive alien insect pests (e.g., Emerald Ash Borer), as well as continuously assessing the risks and mitigating the impacts of wildland fires and climate change on Canada's forest resources.

*Commitments for 2011-12:* Assess and disseminate information on the risks and impacts of wildland fire on Canada's forests and on the safety and security of Canadians.

Synthesize and deliver information on high-priority forest pests to decision makers by enhancing the framework for pest risk analyses and contributing to risk analyses of Canada's forest pests.

The department also ensures the safety and security of Canada and its people through its work in monitoring and planning for adverse events (e.g., earthquakes, volcanic eruptions, landslides, geomagnetic storms, radiological and nuclear incidents, and tsunamis). The provision of hazard information and products supports professional organizations, the private sector, and other levels of government, including international government bodies, in the planning for and mitigation of risks around these events.

*Commitments for 2011-12:* Monitor, maintain and disseminate earthquake information data and systems to provide near-real time alerting of earthquakes in Canada to the public.

Disseminate hazard information through the Canadian Hazard Information System in a timely manner.

NRCan will continue to work through a multi-stakeholder process to update the explosives regulations to reflect modern industrial practices while strengthening the safety and security of manufacture, storage, and handling of commercial explosives in Canada.

*Commitments for 2011-12:* Manage the process for Modernizing Explosives Regulations, including developing proposed regulatory improvements; effectively managing engagement with stakeholders; and moving towards implementation of the new Regulations.

## Benefits for Canadians

How Canada responds to the changing climate and manages risks from natural and human-induced hazards has a significant impact on the safety and security of Canadians. NRCan manages and helps mitigate hazards and works to develop long-term mitigation and adaptation strategies based on scientific knowledge and expertise, thereby ensuring the safety and security of Canadians, as well as the responsible stewardship of the country's natural resources.

| 3.2 Natural Resources and Landmass Knowledge and Systems | Planned Spending | Program $K | FTEs |
|---|---|---|---|
| | 2011-12 | 84,371 | 616 |
| | 2012-13 | 67,890 | 576 |
| | 2013-14 | 67,272 | 576 |

**NRCan Priority: Improving the Performance of the Regulatory System for Major Project Reviews**

The Major Projects Management Office (MPMO) was established to support the Government of Canada's commitment to improve the performance of the regulatory system for major resource projects as a means to ensure Canada's competitiveness, prosperity and environmental sustainability. The objective is to improve the efficiency and effectiveness of the federal regulatory review process for individual resource projects and to drive system-wide improvements to the regulatory system in Canada.

By providing overarching management of the federal regulatory review process for over 60 major resource projects (e.g. environmental assessment, regulatory decision-making and Aboriginal consultation responsibilities) and serving as a single window into the review process for industry, non-governmental organizations and Aboriginal groups, the MPMO, in collaboration with other departments and agencies, ensures that the federal review process for major resource projects is timely, predictable, transparent and accountable with appropriate consideration of social and environmental effects associated with project proposals and consistent and meaningful Aboriginal consultation.

*Commitments for 2011-12:* Lead the on-going development and implementation of a whole-of-government strategy to deliver a suite of policy, regulatory and legislative improvements to the federal regulatory system.

Ensure that environmental assessment, regulatory review and Aboriginal consultation processes for major resource projects are timely, integrated and well coordinated through the development of project agreements and adherence to agreed upon service standards.

Work collaboratively with partners to strengthen northern regulatory regimes and to improve the integration of federal and provincial review processes.

**NRCan Priority: Advancing Sustainable Resource Development in the North**
A better understanding of Canada's landmass in the North will present greater opportunities to sustainably develop and protect its natural resources. For example, NRCan is conducting bathymetric and seismic surveys to compile accurate coordinates on the limits of Canada's continental shelf. This geoscience and mapping data will support Canada's claim to the United Nations Convention on the Law of the Sea to extend the country's sovereign rights on the Atlantic and Arctic continental margins. Furthermore, NRCan's location-based (geographic) information and derived products provides a reference foundation that underpins many economic and environmental social applications.

*Commitments for 2011-12:* Provide final set of coordinates for the outer limits of Canada's Atlantic and Arctic offshore continental shelf.

Develop and maintain up-to-date location-based (geographic) information, topographic maps, including adding 500 new topographic maps at 1:50 000 scale and revising other maps as appropriate.

Provide governments, industry and Canadians with up-to-date and archived remote sensing imagery, and up-to-date applications and geodetic reference points.

NRCan provides accurate and accessible geographic information for the maintenance of the Canada / United States boundaries. Work will continue to conduct boundary surveys of Aboriginal settlement lands upholding Canada's obligations under land claim settlement legislation and treaties; and provide boundary certainty in the North, Canada's offshore area, Aboriginal Lands and National Parks.

*Commitment for 2011-12:* Complete annual land claim survey obligations as defined in the legislation and agreements for the Yukon, NWT and Nunavut.

Finally, the department is providing safe, efficient and cost-effective logistical support to researchers conducting field work throughout the Canadian Arctic, such as air / ground transportation, equipment, fuel and accommodations, through the Polar Continental Shelf Program (PCSP).

*Commitments for 2011-12:* Finalize cooperation arrangements with the Department of National Defence in the Arctic to expand the PCSP facility in Resolute.

Provide cost-effective logistical support to PCSP-granted projects and to major government science programs.

## Benefits for Canadians

NRCan works to produce scientific knowledge and data, and oversees systems that facilitate the knowledge creation and information sharing on natural resources, all with a view to inform decision-making on the use and stewardship of natural resources. It also works to increase the efficiency and effectiveness of the regulatory review process of major natural resource projects, thereby increasing investments and creating jobs in our natural resources.

## 4.1 Internal Services

| NRCan Priority | Integrated Management |
|---|---|

Activities in this area contribute to the Greening Government Operations Theme of the FSDS.

Internal services support NRCan in delivering on its mandate and priorities through three main categories: governance and management support, resource management services, and asset management services. Internal services must adjust and respond to the evolving business priorities and requirements of the organization, and ensure the department's capacity and responsiveness to deliver better results.

| 4.1 Internal Services | Planned Spending | $K | FTEs |
|---|---|---|---|
| | 2011-12 | 162,493 | 1,096 |
| | 2012-13 | 154,147 | 1,096 |
| | 2013-14 | 153,008 | 1,096 |

**NRCan Priority: Integrated Management**

Continue to improve NRCan's integrated business planning process, including strengthening performance and risk management and improving the governance structure, to ensure the relevance of our programming and allow for greater integration and management of our outcomes and performance. The renovation of the Program Activity Architecture will allow for better attribution of results and more effective reporting on performance – ensuring transparency to Parliament and Canadians. The implementation of a comprehensive risk management framework will support strengthened risk management across the department. The improvements to the governance structure will support stronger integration, support the development of concrete measures to transform business processes and contribute to building a culture of collaboration and collective leadership. The implementation of Felix/SAP should facilitate the integration of these initiatives and enhance key business processes.

The department is also focused renewing and growing our human capital by recruiting more strategically and supporting development to maximize the contribution and growth of our people. For example, the alignment of recruitment initiatives to identified needs and priorities will support the achievement of our outcomes and will address identified skills shortages. To that effect, a particular focus will be placed on strengthening our capacity in science and technology to ensure our ability to deliver in the longer term. Building on an effective executive performance and talent management process, further emphasis will be placed on the management of our talent through the establishement of a comprehensive leadership development framework. The Key NRCan Competencies of organizational awareness, collaboration, innovation and flexibility will increasingly be ingrained into our talent management culture and integrated into our recruitment, learning, leadership development, performance management and recognition strategies.

*Commitments for 2011-12:* Implement a revised governance structure to ensure the integration and ongoing renewal of risks, human, asset, and information resources through the planning, ongoing monitoring and reporting of activities.

Support implementation of the renewed Program Activity Architecture, the Performance Measurement Framework, and the Corporate Risk Framework.

Implement Felix/SAP to support improved business processes for financial, materiel and project management. Leverage the new system to better track financial and non-financial performance through quarterly reviews.

Focus HR strategies on business needs, including the implementation of a departmental approach to performance management and the design and implemention of targeted initiatives to recruit and develop S&T professionals.

Implement an organizational code (Values & Ethics) based on the principles of the new federal Public Service Code of Conduct.

Implement 2011-2016 Action Plans for Official Languages and Employment Equity.

Implement a re-engineer Access to Information process to ensure timely and continuous review of active requests and, if necessary, resolve delays to ensure commitments to meet processing times.

## The Federal Sustainable Development Strategy and NRCan

NRCan is solely or jointly responsible for 46 FSDS Implementation Strategies under the Air, Water and Nature themes of the Federal Sustainable Development Strategy (FSDS). In addition, NRCan is responsible for one FSDS target under the Nature theme – 7.3 (Sustainable Forest Management). The link between the NRCan PAA and Target 7.3 in the FSDS is illustrated below.

| **FSDS Theme III – Protecting Nature** | |
|---|---|
| **FSDS Goal 7 – Biological Resources**<br>Sustainable production and consumption of biological resources within ecosystem limits. | |
| **FSDS Target – Sustainable Forest Management** | **FSDS Indicator** |
| 7.3 – Improve the management of Canada's forest ecosystems through the development and dissemination of knowledge. | Number of peer-reviewed publications related to forest ecosystems. |
| **FSDS Implementation Strategies** | **NRCan PAA sub-activity** |
| 7.3.1 – First Nations Forestry Program – support initiatives to enhance first nations' capacity to sustainably manage reserve forests and other forests (jointly responsible with Indian and Northern Affairs Canada) | The program that directly supports this implementation strategy will be completed in March 2011 and the performance results will be reported in NRCan's 2010-11 Departmental Performance Report. The successful delivery of this program has led to the incorporation of many of its principles into the multi-departmental Aboriginal Forestry Initiative (AFI). The AFI will work effectively to target federal resources to economic development projects in Aboriginal communities as a part of: 1.1.5 Forest-based Community Partnerships. |
| 7.3.2 -- Generate and disseminate scientific knowledge related to forest ecosystems. | 2.2.2 Forest Ecosystems Science and Application |

# Section III: Supplementary Information

## Financial Highlights

The future-oriented financial highlights, prepared on an accrual basis, presented within this Report on Plans and Priorities are intended to serve as a general overview of Natural Resources Canada's operations. These financial highlights are prepared on an accrual basis to strengthen accountability and improve transparency and financial management.

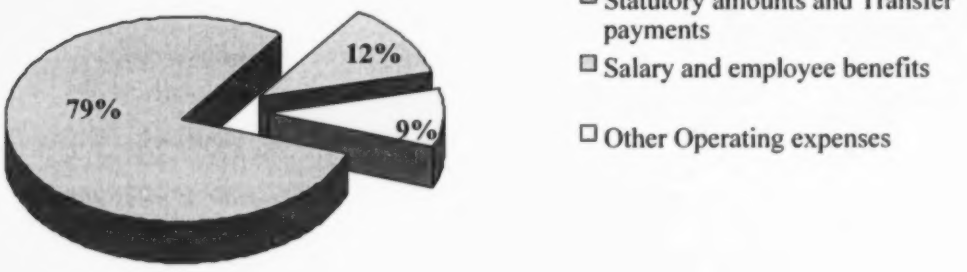
The Future-oriented Statement of Operations is available at this address: http://www.nrcan-rncan.gc.ca/com/resoress/rpprpp/index-eng.php

**Condensed Future-oriented Statement of Operations***
**(in millions of dollars)**

| For the year (ended March 31) | Forecasts 2011-12 |
|---|---|
| EXPENSES | |
| Total Expenses | $ 3,620 |
| REVENUES | |
| Total Revenues | 1,828 |
| **NET COST OF OPERATIONS** | **$ 1,792** |

* The department has different net results of operations for the year on a government funding basis (cash) as reported in this Report on Plans and Priorities than on an accrual accounting basis as reported in the Future-oriented Statement of Operations.

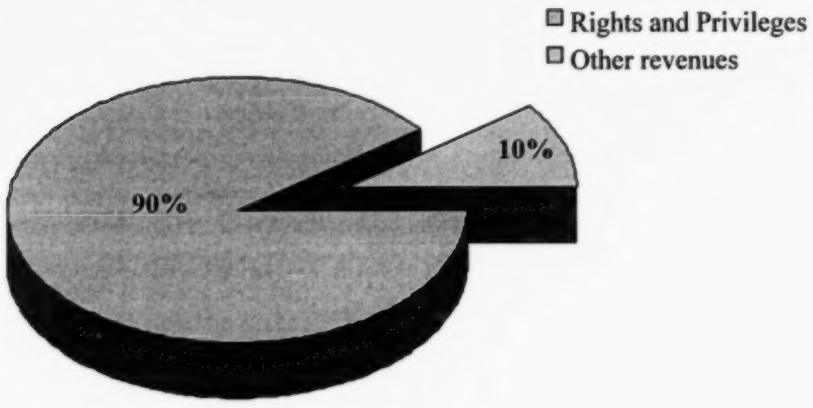
### Expenses by Type




On an accrual basis, total expenses are forecasted at $3,620 million in fiscal year 2011-12. The majority of these forecasted expenses ($2,828 million) are statutory amounts and transfer payments related primarily to program activities 1.1 Economic Opportunities for Natural

Resources and 2.1 Clean Energy. The balance of forecasted spending is made up of salaries and employee benefits (12% or $424 million) and other operating expenses (9% or $338 million). This is the first year the Department is presenting future-oriented financial statements.

**Revenues by Type**




On an accrual basis, total revenues are forecasted to be $1,828 million in fiscal year 2011-12. The majority of these forecasted revenues ($1,640 million) are obtained primarily from the provision of Rights and Privileges, with the remainder from other services, fees and charges ($188 million).

## Supplementary Information Tables

*All electronic supplementary information tables found in the 2011–12 Report on Plans and Priorities can be found on the Treasury Board of Canada Secretariat's web site at:* http://www.tbs-sct.gc.ca/rpp/2011-2012/info/info-eng.asp.

- *Details on Transfer Payment Programs (TPPs)*
- *Up-Front Multi-Year Funding*
- *Greening Government Operations*
- *Horizontal Initiatives*
- *Upcoming Internal Audits and Evaluations over the next three fiscal years*
- *Sources of Respendable and Non-Respendable Revenue*
- *Summary of Capital Spending by Program Activity*
- *User Fees*

# Section IV: Other Items of Interest

## Sustainable Development

Based on the Federal Sustainable Development Strategy (FSDS), NRCan commits to provide in the electronic layer, Sustainable Development and Strategic Environmental Assessment Reporting, (http://www.nrcan-rncan.gc.ca/sd-dd/strat-eng.php) the following:

- NRCan's Vision for sustainable development.
- Departmental processes and tools that integrate sustainable development into departmental decision-making.
- Planning highlights and commitments for enhancing Strategic Environmental Assessment.
- Detailed information on departmental sustainable development activities that relate to the department's mandate and contribute to the FSDS goals, targets and implementation strategies.

For complete details on the Federal Sustainable Development Strategy, please see http://www.nrcan-rncan.gc.ca/sd-dd/strat-eng.php?PHPSESSID=e8a73d11aae9f0b8a9b07f90dbf0d81f

You may also visit NRCan's Sustainable Development web portal for information on NRCan's mandate and sustainable development, historical Sustainable Development Strategies and more http://www.nrcan-rncan.gc.ca/sd-dd/index-eng.php.

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[i] http://www.nrcan-rncan.gc.ca/com/resoress/actacte-eng.php
[ii] http://www.nrcan.gc.ca/com/deptmini/portf-eng.php
[iii] http://www.aecl.ca/Home.htm
[iv] http://www.neb.gc.ca/clf-nsi/rcmmn/hm-eng.html
[v] http://www.cnsc-ccsn.gc.ca/eng/
[vi] http://www.cnlopb.nl.ca/
[vii] http://www.cnsopb.ns.ca/
[viii] http://www.sdtc.ca/
[ix] http://www.appointments-nominations.gc.ca/prflOrg.asp?OrgID=ESR&type-typ=3&lang=eng
[x] http://www.infosource.gc.ca/inst/npa/fedtb-eng.asp

[1] An ongoing priority has no end date; a previously committed priority has an estimated end date and was committed to in prior budgets or main estimates documents.

[2] For more information on renewable alternatives to gasoline and diesel please visit the following website: http://www.oee.nrcan.gc.ca/transportation/alternative-fuels/index.cfm?attr=16